



THE ASSAM GAZETTE

অসাধাৰণ

EXTRAORDINARY

প্ৰাপ্ত কৰ্তৃত্ব দ্বাৰা প্ৰকাশিত

PUBLISHED BY THE AUTHORITY

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No. 54 Dispur, Thursday, 1st February, 2024, 12th Magha, 1945 (S. E.)

GOVERNMENT OF ASSAM

ORDERS BY THE GOVERNOR

DEPARTMENT OF HOUSING AND URBAN AFFAIRS

NOTIFICATION

The 17th January, 2024

DoHUA EcF No.431520/2024/54.- In exercise of the powers conferred by the Sub-Section (2) and (3) of Section 10 of the Assam Town & Country Planning Act, 1959 (as amended) read with Rule 6 of the Assam Town and Country Planning (Publication of Master Plan and Zoning Regulation) Rules, 1962, the Governor of Assam is pleased to publish the following notice regarding the publication of the Final Master plan for Badarpur.

NOTICE FOR PUBLICATION OF THE FINAL MASTER PLAN FOR BADARPUR

1. It is notified that the Final Master plan for Badarpur is prepared by the Directorate of Town & Country Planning, Government of Assam and adopted by the State Government under Sub Section (2) and (3) of Section 10 of the Assam Town and Country Planning Act, 1959 (as amended) read with Section 6 of the Assam Town and Country Planning (Amendment) Rule, 1962 for the area described in the schedule below, is hereby published.
2. The Final Master plan with all relevant papers and maps may be inspected free of cost during the office hours at the office of the Director, Town & Country Planning, Dispur, Guwahati-6, Deputy Director, Town & Country Planning, District Office- Karimganj, office of the Chairman, Badarpur Municipal Board and Badarpur revenue Circle office. Copies of the Final Master Plan is also available in the office of the Director, Town & Country Planning, Dispur, Guwahati-6 and Deputy Director, Town & Country Planning, District Office- Karimganj for sale on payment.

Situation and area:-

1. District : Karimganj (At present partly in Cachar district)
2. Town : Badarpur
3. Master plan area : 24.61 Sq. Km.
4. Municipal area : 4.04 Sq. Km.

PARGANAS AND VILLAGES INCLUDED IN THE FINAL MASTER PLAN FOR BADARPUR

Sl. No.	Pargana	Name of Mouza	Sheet Name/ Number	Total Sheet	Dag No.
1	Chapghat	Badarpur Town ALAKULIPUR	1 - 15	15	All Dag Nos.
2	Chapghat	Badarpur Town CHAPRA	1 - 20	20	All Dag Nos.
3	Chapghat	Badarpur Town LAHIRBOND	1 - 4	4	All Dag Nos.
4	Chapghat	Badarpur Town DEWCHAPRABE EL	5	1	All Dag Nos.
5	Chapghat	Badarpur Town RAILWAY	6 - 13	8	All Dag Nos.
6	Chapghat	Badarpur Town CHALEABARI	14 & 15	2	All Dag Nos.
7	Chapghat	Badarpur Town JUM 3 rd Part	--	1	All Dag Nos.
8	Chapghat	JUM 5 th Part	1 & 2	2	All Dag Nos.
9	Chapghat	JUM 6 th Part	--	1	All Dag Nos.
10	Chapghat	JUM 7 th Part	1	1	All Dag Nos.
		Badarpur Town JUM 7 th Part	2	1	All Dag Nos.
11	Chapghat	UMARPUR 1 st Part	--	1	All Dag Nos.
12	Chapghat	UMARPUR 2 nd Part	--	1	All Dag Nos.
13	Chapghat	UMARPUR 3 rd Part	1 & 2	2	All Dag Nos.
14	Chapghat	TIKARPARA	1 & 2	2	All Dag Nos.
15	Chapghat	SRIGAURI	--	1	All Dag Nos.
16	Chapghat	NIJMALUA	1 & 2	2	All Dag Nos.
17	Chapghat	NAHARPUR	--	1	All Dag Nos.

Note: Villages including Badarpur Municipal town from sl.1 to 10 falls under Cachar district and Villages under serial 11 to 17 falls under Karimganj district as per recent Government notification vide no.ECF.NO 262728/5-A dtd 31/12 2022.

DESCRIPTION OF BOUNDARY:

- NORTH** : Katigora & River Barak.
- SOUTH** : Paterakandi, Hasanpur, Dakhingram, Srigouri Kitta
Tikarpara(Illam), Medolbeel, Alekergol & Jum 2nd & 4th Part.
- EAST** : Hailakandi District, Jum 7th Part & Jum 4th Part
- WEST** : Kandigram

KAVITHA PADMANABHAN,
Commissioner & Secretary to the Government of Assam,
Department of Housing and Urban Affairs,
Dispur, Guwahati-6.

CHAPTER 1: INTRODUCTION TO MASTER PLAN AREA

1.1 Location, regional setting, brief history of the town and surrounding :

Location:-

Badarpur was the important physical linkage point (transportation node) even before the independence of India. It was located in the South east corner of District Sylhet. Before partition of India. It was an important communication centre with the East Pakistan and undivided Assam (i.e. Meghalaya, Mizoram, Arunachal, Nagaland and Tripura). Badarpur was a big railway station before partition of India where thousand of Railway Employees were engaged. Karimganj, Patherkandi, Ratabari and Badarpur were the Part & Parcel of Sylhet District. The Eastern Boundary of Sylhet District was the "Jaikhai Channel" which is running by the Eastern side of present Dak-cum-Inspection Bungalow at Badarpurghat. After partition of India it was included with Cachar District. The NH 44 is running by heart of the Town, the name which was "Surma Trunk Road" before partition.

In the year 1983 Karimganj district was constituted with four Thanas (Police Station.) i.e. Karimganj, Patherkandi, Badarpur and Ratabari. District was declared considering its growth & Development. Now Badarpur is located in the Eastern extremity of Karimganj District in the in the left bank of River Barak. Though after partition of India the importance was partially minimized but after extension of railway line up to Agartola at Tripura and to Bhairabi of Mizoram, the importance of it again getting increased rapidly and

as a result of which the proposal of Badarpur Railway Division is under consideration of Central Government.

Badarpur Town now consists of 12 Nos. of wards after delimitation of 4 Nos. wards. A proposal for inclusion of excluded area along with some other nearby rural area is pending with Government.

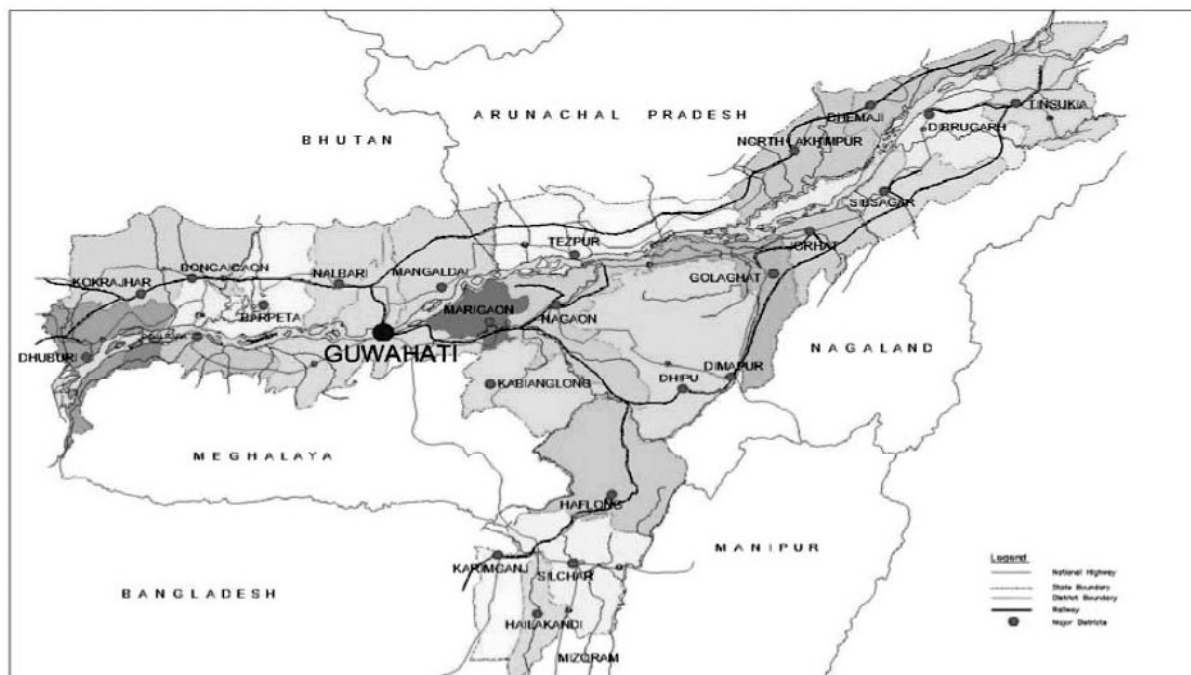
Regional Setting:-

Badarpur is located at 24.9°N 92.6°E. It has an average elevation of 16 metres (52 feet) from the mean sea level. Badarpur is surrounded by river Barak on the north, Saraspur hill range in the east and southeast and villages and paddy field in the west.

Badarpur is now not only an important transportation nodal point for the Barak Valley Zone but also for other states of North Eastern Zone.

Badarpur was declared as town in the year 1964 with an area of 6.80sq. km. and the population of which was 6000, though the Railway Colony is surrounded by Badarpur Town but the Railway land is excluded from it. In the year 1973 an area of about 1.090 Sq. km. has been excluded from the existing town.

The district has no airport but the town as well has air connectivity through nearest Kumbirgram airport at Cachar district around 56 kms. from Badarpur town.



Brief history of the town and surrounding:-

Before independence, under British Government, Karimganj district was one of the sub-division of Shylet in the state of Assam, which went to the erstwhile East Pakistan now called Bangladesh.

At the time of independence, this sub-division was partitioned and two and half police station along with the rest of the district of Shylet went to the East Pakistan (Now Bangladesh) and the remaining part was included within the district of Cachar in the state of Assam.

Badarpur is a town in Karimganj district in the state of Assam, India. Badarpur is known as Railway Town. The area is also popularly known as "Gateway to the Barak Valley" of Assam. The railway junction under the North Eastern Frontier Railway, the Badarpur Junction is the first railway station in

the valley. It was first enacted and introduced by the then British Government under metre gauge rail lines from Badarpur to Lumding in 1898.

There is a Historical Fort located near Dak-cum-Inspection Bungalow at Badarpur, constructed during the period of Mughal Empire which was used in the battle of "Kachari Raja & British Government and the fort is still in existence.

The hundred years old jungli Kalibari situated at Badarpurghat. The worshipers from different places of Karimganj, Hailakandi, Silchar and other parts of the states visit the Temple in every Tuesday & Saturday.

Factory of Barak Valley Cement Ltd. is located at ward no. IV of Badarpur Town and partly outside the town in Jhum Pt.VII. There are many other small industries, like Industrial Estate, Stone Crusher Machine Industries, Grinding machine Industries etc exists there.

There are so many "Mokams" i.e Islamic shrine located within the Badarpur area viz. Shah Adam khaki Mokam, Shamaderer Mokam, ShahJiauddin's Mokam. According to people, among all Shah Adam khaki Mokam is the more important Mokam.

These Mokams are about 600 years old. The people of all caste and community visit those regularly to offer their prayer.

Badarpur Town Market is the biggest market place in the locality. The Town people and about nine thousand people of railway colony including the people of eight kilometer radius of suburb area visit and utilize the market for their day to day needs.

There is a Buddhist Temple at Badarpur Railway colony area which is about one hundred years old where the Buddhist offer their prayer.

1.2. Climate, topography and soil condition :

CLIMATE : Climate of an area greatly effects human activities and in turn town life & its functioning. Though the climate of Badarpur town is almost similar with the rest of the Assam or Barak Valley's climate. Yet, some variations are noticed due to its physical features. Its main characteristics are cold winter and a moderate cold spring and fairly hot humid summer with high speed wind in between the spring and summer with lightning and thunder storms.

Climatically , the whole year can be divided into three period. From May to September is the wettest season. The heavy rainfall months are May, June, July and August. The average rainfall of the district is 3910 mm. The maximum rainfall recorded in 1998 was 4587 mm and the minimum recorded in 1979 was 1552 mm. Weather is cold and dry from October to January with occasional shower with a average rainfall of 20 mm. January is the coldest month with minimum temperature of 10.4 degree centigrade. June is the hottest month with maximum temperature raising up to 39.0 degree centigrade. The average mean maximum temperature is 30.0 degree centigrade. The general atmosphere is humid with high percentage of relative humidity even in the winter months.

TOPOGRAPHY: Badarpur has almost a plain topography with some medium range hilly zone in the extreme western part of this master plan area. Badarpur comprises varied geographical features like agricultural plains, shallow wetlands, hilly terrains and forests. The major river flowing near by the town is Barak which is the main source of water to this habitat.

SOIL CONDITION : The valley in the Karimganj district are under laid by semi consolidated sandstone, siltstone, shales and clay of upper tertiarate. The aquifers are pre dominantly clays with occasional sand and fine grained soft

sand stone. The water level aquifers comprises mainly of silts and sand clays. The soil varies from sandy to clay texture with pH from 4.5 to 5.9. The major classes of soil prevalent in the area are old riverine alluvial, Old Mountain alluvial, non-laterite red and pit soils. Though the soil condition is favorable for flora, out of 183900 hectares of land in the district about 48054 hectares of land under forests which constitutes about 26.13% of the total geographical area in which valuable timber like Cham, Sundi, Kathal, Gamari besides Bamboo cane etc. are found in abundance.

1.3. City influence and its characteristics including settlement pattern, rural-urban scenario, history of the physical growth and expansion of town etc :

CITY INFLUENCE AND ITS CHARACTERISTICS INCLUDING SETTLEMENT PATTERN:

Preparation of Badarpur Master Plan is an effort to evolve scientific and rational policies which will meet functional needs of the town and to satisfy the aesthetic and emotional aspirations of its citizens.

The Badarpur town is situated on the bank of the river Barak, which is a river border between Karimganj & Cachar District. Settlement pattern of Master Plan area can be divided into two i.e rural and urban. In urban area the settlement pattern includes isolated to grouped housing (R.C.C. , Assam type) and single storied to multi- storied buildings (own ownership, Apartments) are found and in case of rural area the settlement pattern found is isolated / grouped housing made of R.C.C. type/ Assam type / Bamboo-hut or others without necessary sanitation and drainage facility.

There is another land border and river border at nearby Karimganj town between India and Bangladesh. Now Badarpur stands on this surface and rail route connecting Bangladesh borders with other parts of Barak valley region and the states of Meghalaya and Tripura. Government of India's recent Look East policy and enhancement of communication and expansion trades among

SAARC countries will provide economic benefits and employment opportunities to small town like Badarpur.

In respect of settlement pattern in the town, it may be mentioned that initially the settlements were developed in and around Railway junction at Badarpur and Badarpur ghat since British period. However being situated at the bank of river Barak and at waterway route between Kolkata and Lakhimpur (Cachar district near Silchar), early settlement also grew at the river bank at the present municipal town and proposed Master plan area. The present decadal growth of the town is 4.44%. People belonging to Bengali Hindu and Bengali Muslim communities are the inhabitants of Badarpur town.

Settlement pattern of Master Plan area can be divided into two categories i.e rural and urban. In urban area (including the railway township area) the settlement pattern includes mostly the isolated housing (R.C.C. / Assam type) and in railway area group housing in railway quarters are found in compact dense distribution. Single storied to multi- storied buildings (mostly own ownership) are found in the central commercial part of the town. In case of rural area the settlement pattern is mostly isolated R.C.C. / Assam type / Bamboo-hut or others. Sanitary and drainage facilities are poor in large portion of habitable area.

Rural-urban scenario:

Badarpur master plan area including Badarpur town shows rural dominance till now because the urban centre is still passing through slow rate of transformation from rural to urban. Economic activities in the town is sluggish and consequently it could not support or justify investment in major urban infrastructure or large scale urban project.

History of the physical growth and expansion of town:

Being situated at the bank of river Barak and at waterway route between Kolkata and Lakhimpur (Cachar district near Silchar), early settlement also grew at the river bank at the present municipal town and proposed Master

plan area. Later on the settlements were developed in and around Railway junction at Badarpur and Badarpur ghat since British period.

Now the probable expansion of the town may take place toward western direction of the Master plan area. The probable areas for town expansion are in the locality of villages Nij Malua, Srigouri, Naharpur, Tikarpara and Umarpur pt II.

Need for the Master Plan:

Master plan is a medium to long term perspective planning document, generally for 15 to 25 years. It is also a comprehensive plan for service area as per likely spread of city in next 15 to 25 years. It describes all programme/policy required in next 20 years in phased manner. The designs and estimates are prepared approximately in subsequent stages by the concerned works department. It finalizes some of the major parameters so that action on future events can be taken up. The detailed project report (DPR) is then prepared for works in phases. At present the general practice is to prepare master plan for urban areas and its surrounding influence area; however these master plans address town planning aspects including land use but does not include detailed Infrastructure plan for each sector.

Planning is a continuous process. The master plan or outline development plan is prepared to evolve a scientific and rational policy for urban development. The plan guides the future course of development for providing better environment of the people living in a geographical area. The Master Plan is being envisaged as Outline Development Plan and thus the plan period has been kept moderate like 15 to 20 years maintaining the characteristics of an outline development plan. The period of Badarpur master plan is considered up to 2041. In normal course, it should be revised after 2041 and if necessity demands it may be revised even earlier.

CHAPTER 2 : DEMOGRAPHY

2.1. Total population, male/female population, population growth rate, population density, sex ratio, literacy (Total- male-female rate), working population and non-working population, SC-ST population etc. :

(a)**Population:** As per the year 2011 census report, the population of town is 22180 including Railway town. The percentage decadal growth for 2001-2011 was 4.44%. This figure of decadal growth seems to be due to difference of birth rate and death rate , a minimal proportion may be migration of people from adjoining rural areas during 2001-2011. On graphical plotting of population of past decades since 1951, the population of Badarpur town may be projected at 23123 in the year 2021, 24066 in the year 2031 and 25009 in the year 2041. The master plan area population in 2011 is 41590 persons. The population of master plan area in 2001 was 36174 persons. The decadal variation of population from 2001 to 2011 in master plan area is 14.97 %.

(b) **Male/Female population, population growth rate, population density, sex ratio, literacy:** Out of total population of 22180 persons in Badarpur town, male population is 11215 and female population is 10965. Population growth rate of the town is 4.44 % per decade. Density of population is 5490 persons per Sq Km. The sex ratio and literacy percentage are 978 female against 1000 male and 85.87 % respectively.

Simultaneously, out of total population of 41590 persons in Badarpur master plan area, male population is 21046 and female population is 20544. The growth rate of population of Badarpur master plan area is 14.97% per decade. Density of population is 1665 persons per Sq Km . The sex ratio and literacy percentage are 976 female against 1000 male and 58.26% respectively.

(c)**Working and non-working population, SC/ST population :** Out of total population of 41590 persons in Badarpur master plan area, the number of working population is 12640 only and that of non-working population is 28950. The total working population in Badarpur town

area (including Railway town) is 6940. Out of total population of the town, the work force is 31.29%.

. The population of SC and ST in Badarpur Master plan area and Badarpur urban area are as follows:

Area	SC in 2001	SC in 2011	ST in 2001	ST in 2011
Badarpur urban	3261	3640	110	38
Master plan area	4981	5533	110	49

2.2 Migration population : During the decade- 2001-2011, a section of people living in the surrounding villages have migrated to the Badarpur town area in search of their livelihood. However, the figure of migration is a meager one due to the existence of a greater urban area named Silchar, the district headquarters of the neighbouring district of Cachar, having more opportunity of employment and tempting the unemployed people of the rural areas of Karimganj district. The distance of Badarpur from Silchar town is only 29 kilometres.

2.3 Household density and size: Household density is mostly thin and scatteredly distributed over the Master Plan area. In general household size varies from 4 to 9. Average household size is 5.

2.4. Population projection up to 20 years:

Population projection up to 2041 is shown in the table mentioned below:

Population Projection Table

Year	Badarpur Town	Badarpur Master Plan area
1991	16498	
2001	21237	36174
2011	22180	41590
2021	23123	47006
2031	24066	52422
2041	25009	57838

NB: 2021 to 2041 population figures are projected figures. Comparative analysis done through Graphical method and Incremental Increase method.

CHAPTER 3 : ECONOMIC BASE AND EMPLOYMENT

3.1 Formal Sector : Badarpur town being, a small urban unit, does not have any remarkable employment in formal sector. It has a population of 6940 (4257+2683) persons engaged in formal sector as per census 2011. It is around 31.5% of total town population.

3.2 Informal sector : The town as well as the adjoining rural areas included in the Badarpur master plan area has a very poor enrolment of only 8% populations are in informal sector. In urban area, the road side vending, hawkers in trains, buses are the major activities in informal sector. In case of rural areas within the master plan area , the informal sector activity is primarily on partial employment on agriculture and allied activities.

3.3 Occupational pattern : Major share of occupation is in tertiary sector in the planning area. The working class in the town are mostly in service sector and a portion in trade and commerce. However around 65% of working population in rural areas of planning area are in agriculture and allied activities.

Table showing list of activities of working population in 2011 in Badarpur urban area is as below:

Total Population	Total workers	Percentage of workers	Workers in primary sector	Workers in secondary sector	Workers in tertiary sector
1	2	3	4	5	6
22180	6940	31.5%	32	27	6881

Total worker, Main worker and Marginal worker in Master Plan area in 2011 are as follows:

Total Worker	Main Worker	Marginal Worker
12894	9982	2912

CHAPTER 4 : HOUSING AND SHELTER

4.1. Housing scenario : Other than road side well-built Govt. offices complexes in the Badarpur town area including Badarpur Municipal office , the pattern of housing in the surrounding villages included in the master plan is a mixed one. 20% of houses are RCC building, 30% is Assam type building though they are very old ones and the rest 50% huts and poor dilapidated housing.

Residential use is the major land use occupying about 30% of planning area. The residential areas are scattered in patches all over the master plan. The narrow roads, inadequate drainage, improper setback within the plot boundary form the scenario of infrastructure in residential areas.

Transferable Development Right (TDR):-

The shortages of pucca houses in master plan area are being covered through BLC component of PMAY(Urban). At present the demand for PMAY houses in municipal area is 300. In order to plan Affordable Housing project for urban poor, an area of 0.13 sqkm has been delineated in the residential zone in village Jum PT-V (Sheet-I). It is proposed to implement TDR (Transferable Development Right) policy in pooling private land from owner and private developer. The proposed widened road to be used for effecting TDR policy.

4.2. Housing supply mechanism (self/pvt. Builders & developers/govt. housing schemes) : There is almost absence of government housing colony or housing scheme. Group housing and Apartment housing are not yet a normal trend. Most of the houses are with individual private ownership and rented tenants. Housing supply is less than the demand leading to few informal slums and kuchcha housing with insanitary condition.

4.3. Housing condition, Type of Structure, Household facilities available, availability of kitchen, Latrine, Bathroom, Drainage :

Shelter is one of the basic human needs and its conditions greatly affect the character of human life. It is one of the burning problems of the present day's urban areas. Though in Badarpur planning area shortage of housing is not the major problem but the type of house, housing condition, basic need related to housing like drinking water, sanitation, garbage disposal etc. do not conform to norms. There is total absence of neighborhood structure in the planning area. Around 62% of total housing structures have appropriate facility of kitchen, sanitary latrine and internal drainage.

4.4 Slum-squatters and informal housing share, including list of all slums and informal housing localities in MP area and marking location on map :

There is scattered slums in Badarpur urban area. But there are informal housing in different localities in the master plan area. There are kutcha houses and houses in dilapidated condition and in slum like physical environment. The following are the areas:

Badarpur - Slum Profile :

The existing slum like physically built up area is divided into 22nos of pockets in 4 numbers of wards & railway land. Profile of those area in the town can be tabulated as:

Badarpur - Slum Profile table:

Sl. No.	Ward No.	Name of the Slum Pockets	Total number of Households in the slum	Total Population	Area of Slums in Sq mt.
1	1	Radahanagar	25	125	378
2	1	Bye lane, Radhanagar	27	135	408.24
3	1	Alakulipur,Khadiman	27	147	317.52
4	2	Kalaibond	11	55	166.32
5	2	Badribond	14	70	211.68
6	2	Badarpurghat	30	160	604.8
7	2	J.K.Road	30	120	453.6
8	2	Netaji Nagar	10	50	151.2
9	2	Bijoy Nagar	46	184	695.52
10	2	Subash Nagar	20	80	302.4
11	3	Srinagar	14	56	211.68
12	3	Chowlabill	21	105	317.52
13	3	Rtd Colony	15	60	226.8
14	4	DharmanagarBasti	141	684	2585.52
15	4	Ramkrishna Mission Road	31	124	468.72
16	4	Netaji Pally	14	56	211.68
17	4	Jumbasti BR PWD	15	60	226.8
18	4	Shantinikatan	12	48	181.44
19	Rly Land	Jharna colony	15	60	226.8
20	Rly Land	Wireless Colony	17	68	257.04
21	Rly Land	Institute Colony	11	44	166.32
22	Rly Land	Harijhon Colony	13	52	196.56
Total- 22 Nos. Slums			559	2543	8966.16

4.5 Housing stock, shortage and need assessment :

At present there are total 2,793 number of registered houses within Municipal area. Considering the existence of informal slum pockets with kuchcha houses in uninhabitable physical environment, the tenants, the squatters and the congested pucca houses. The shortage of pucca houses within master plan area including town committee area will be around 1600 nos.

The shortages of 1600 pucca houses in master plan area are being covered through BLC component of PMAY(Urban). At present the demand for PMAY houses in municipal area is 300.

In order to plan Affordable Housing project for urban poor, an area of 0.13 sqkm has been delineated in the residential zone in village Jum PT-V (Sheet-I). It is proposed to implement TDR (Transferable Development Right) policy in pooling private land from owner and private developer. The proposed widened road to be used for effecting TDR policy.

CHAPTER 5 : TRANSPORT

5.1. Network of roads (NH, SH, District roads etc) with average road width :

The length of NH in town area is 6 kms with average width of 15mts.

The Existing and proposed network of roads in respect of SH, District roads etc with average road width are listed below as per data supplied by the PWD (R) Division, Badarpur.

Sl. No.	Name of road	Existing length(inKm)	Width(in MT)	Village / Mouza	Proposed length(in KM)
1	Badarpur Railway Station approached Road	0.24	10.00	Chapra	
2	Ahmed Ali Road	0.35	6.00	Alakulipur	
3	Badarpur Mission Road	0.73	9.00	Chapra	
4	NH-44 to Adamkhaki road	4.00	5.00	Umarpurpt-I	
5	NH 44 to FCI Godown Road	0.965	8.00	Alakulipur	
6	BadarpurUmarpur Road	2.35	5.00	Chapra	
7	Srigauri to Tikarpara Road	0.905	6.00	Srigauri	
8	Rupashi Bari to Kuchirkuna Road	2.50	6.00	Tikarpara	
9	Badarpur to Adarkuna Road	18.50	12.00	Alakulipur	
10	Srigauri Hospital to Naharpur E&D Bund via Durgabazar	4.00	5.00	Malua	
11	NH 44 Dwarail Maktab to E&D	0.50	5.00	Chapra	

	Bund via Bundashil Masjid				
12	Umarpur to Railway line	0.55	4.00	Umarpurpt-II	
13	Railway line to Alekargool	3.00	5.00	Umarpurpt-III	

5.2. Overview of critical roads (e.g., road connecting major roads) and their improvement :

Few important connecting roads in the master plan area have been proposed in the Circulation plan as well as widening of few roads have been proposed as below:

Name of Municipal Area/ Village area	Number of proposed Road	Number of proposed widening of Road
Ward No.IV	1	2
Badarpur Town (Chapar)	0	2
Badarpur Town (Lahirbond)	0	3
BadarpurTown (Dewahaprabeel)	2	3
Umarpur (1 st Part)	0	1
Umarpur (2 nd Part)	0	1
Umarpur (3 rd Part)	3	1
Srigauri	1	0
Naharpur	0	1

i) It is necessary for convenience of public to upgrade all village roads within master plan area (under PWD and Rural Development jurisdiction) to bituminous or paver block roads with minimum carriage width of 5.50 mts.(Minimum Road width of 6.6 mts)

ii) Missing links of few roads in Master plan area have been shown in proposed Circulation map of the Master plan. These links need to be constructed, improved and upgraded.

5.3. Bus/Transport Terminals: Bus Terminus, Bus parking bays, major bus stops, on-street parking areas and infrastructure:

There is no Bus Terminus as such in Badarpur Master Plan area. The major bus stop is at ASTC Bus Stand on NH 6. At present there is no recognized on street parking area in the town area.

5.4. Freight zones and Logistics: Truck terminal, loading/unloading areas, warehousing, feeder transport services: There is no any specific area fixed for truck terminal/loading and unloading purpose/warehousing/feeder transport services as the town is small one with moderate growth of trade and commerce in the town. The loading and unloading activities are generally undertaken at FCI godown within Badarpur town area. The railways have separate yards for loading and unloading of goods at Badarpur Railway junction. The godowns and warehouses are also proposed outside town area at mouza Naharpur near Steamer ghat station.

5.5. Footpaths (minimum 2 metre wide) and Bicycle tracks : There is footpath with an width of approx 2 metre being constructed all along both sides of NH 6 within Badarpur town area.. Also the bicycle track is yet to be provided in the selected roads of Badarpur Master area.

5.6. Parking: Existing on-street and proposed for major commercial, institutional areas and transit areas like train & bus stations and ferry stops :

Few on-street parking areas have been proposed in government institutional areas which also covers few commercial area. All major commercial establishment like Mall, wholesale trading, godown etc will have their own parking areas.

Parking areas are provided in transit area like near ASTC complex, Railway station area , near Chowrangi point, near SBI on NH 6 .

5.7. Areas with major traffic congestion and parking issues, accident prone area : The major traffic congestion and accident prone areas are at Railway crossing at entrance of Badarpur to ASTC complex on NH 6. Similarly some stretches near Petrol pump at Kunapara are accident prone areas .

5.8. Improvement of Rotary and Junctions :

One number of important Road junctions have been identified and physical features have been surveyed. These junctions is the Chowrangee Point near Badarpur Police Station. This is the junction of crossing NH 6 with two roads viz Station Road and Mission Road on two sides. The improvement of Rotary and junctions have been proposed and shown in plan at the proposed Circulation map.

5.9. Street lighting and proposed improvement plan : There are 1400 Nos of electrical poles on different roads, lanes and gally within Badarpur town. The Badarpur Municipal Board has been maintaining the street light from time to time. Recently 11 nos of high mast LED lights have been installed at different locations within municipal area.

5.10. Signage, availability and requirement : There are only few signage in the important localities and roads of the town. All the important roads are required to have signage.

5.11. Major proposals

A Bus and Truck Terminus with the facilities in the level of inter district terminus has been proposed in this Master plan at revenue village Umarpur III.

Sumo and Auto rickshaw stand have been proposed at NH near kona Para and another one at NH near Srigouri Hospital point.

Bus bays and bus stoppages have been proposed at ASTC complex abutting NH 6. In addition 2.0 mt/ 1.5 mt footpath along major town roads have been proposed . Bus bays and bus stoppages at different locations along NH and PWD Roads.

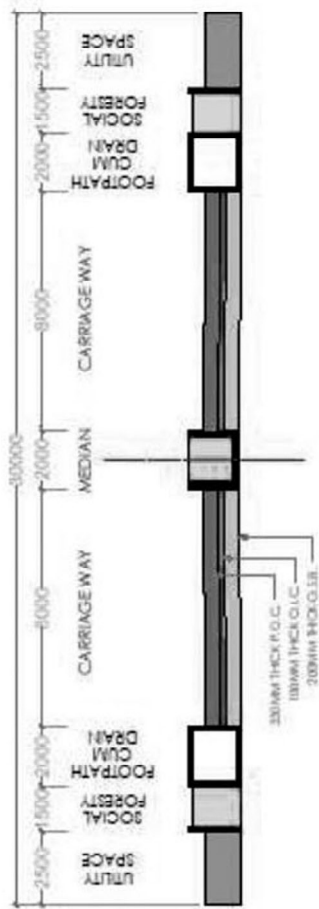
Width of **Right of Way (ROW)** for NH, NH bypass and MDR have been proposed in the Master Plan as below:

NH/ NH By pass-----50.0 mts

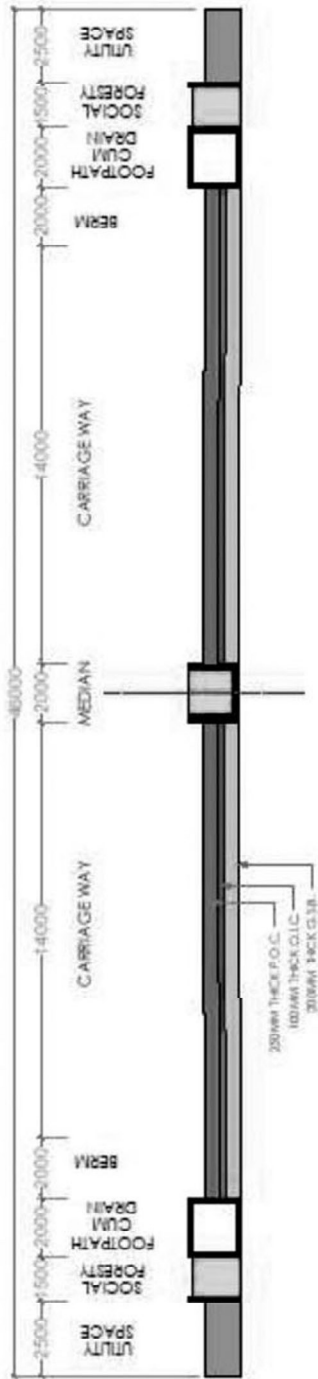
MDR----30.0 mts

In this Master plan, it is proposed to have minimum width of lanes in commercial zone as 5.5 mts and in residential zone as 4.2 mts.

TYPICAL CROSS SECTION FOR 30.00 METRE
MAJOR DISTRICT ROAD



TYPICAL CROSS SECTION FOR 46.00 METRE
NATIONAL HIGHWAY / N.H. BYPASS ROAD



ALL DIMENSIONS ARE IN MILLIMETRE
SCALE = 1 : 200

CHAPTER 6 : INFRASTRUCTURE, PUBLIC UTILITIES & SERVICES

6.1. Physical infrastructure: overview of each sub-sector current status, issues and proposals in consultation with the concerned Line departments of the district:

i. Water supply system : Badarpur town has 2 (two) nos. of water supply plants both have the intake from surface source i.e. river Barak . One plant is located at office campus of Badarpur Municipality, another plant is located at PHE campus near Badarpur ghat . These are monitored by Public Health Engineering Department, Assam.

There are total 13 nos WSS under PHE department within master plan area including town area

The combined capacity of these schemes are 18.7 lakhs iitres.

There are total 1453 nos household connections within Badarpur municipal area and 1254 nos connection in rural villages under master plan area of Badarpur.

ii. Drainage system : The existing drainage network of Badarpur town is mostly kuchcha in nature and needs proper improvement in near future because of the population growth and changes in the physical environment.

Pucca drain with footpath are in existence along both sides of NH 6 running across the town area. The drains at Badarpur Railway town area are mostly pucca drain.

So a DPR under new physical project mission like AMRUT may be prepared and submitted to the government by the implementing agency.

Total drain length under Badarpur Municipal area is 22.303 km . Out of which 7.018 km are pucca and 15.285 km are kutchcha.

iii. Sanitation : All aspects related to sanitation in urban areas are now being taken care of under Swachh Bharat Mission. Both ULB and PHE department have been engaged in day to day activities and programme under Swachh Bharat Mission.

iv. Sewerage network : The town does not have any sewerage system. Households have their own septic tank.

v. Solid waste management : current site assessment, land ownership, proposed site : Badarpur Municipal Board is maintaining a solid waste management wing. The present temporary waste dumping site is at edge of town boundary near Railway gate on NH6. A project report on solid waste management of the town needs to be prepared by the Municipal Board to care of all category of waste, their disposal and decomposition.

In this master plan two nos of Solid Waste Management sites have been proposed. One is at Ward no.IV, approx area 24284 Sq mts.

Other one is at mouza Srigouri with approx area 11,123 sq mts.

Faecal Sludge Treatment Plan (FSTP) / Sewage Treatment Plan (STP):-

The FSTP/STP site is proposed at the mouza Malua, Amgang (Badarpur) having Latitude- 24.8669 & Longitude- 92.5029 . These are shown in Proposed Land Use map of Badarpur Master Plan- 2041.

Temporary Transfer Point of SW:-

The TTP of SW is proposed at two sites of Badarpur Master Plan. One at the Mouza Badarpur town (Alakulipur) near Circle Office at NH-06 and the other at the mouza Jum PT-V (Sheet- I) at Badarpur PWD Road.

vi. Electric sub-station and major transformers : There are 11/0.42 KV distribution sub system in all the villages under master plan area. The power sub station is located at Panchgram just outside the master plan boundary of Badarpur. Major Transformers are located all across various nodal points in the town depending power demand and distribution.

All villages within master plan area are electrified except Niz Malua.

The villages namely Chapra, Srigouri and Naharpur using electricity for small scale industries and villages namely Chapra , Srigouri and Jum-VI using electricity for Water treatment plant.

6.2. Social infrastructure: schools, colleges, universities, hierarchy of hospitals and health centres etc :

Badarpur has four numbers of degree level colleges, three higher secondary school, six numbers of high school, twenty numbers of Middle English school and thirty numbers of Lower Primary school. There are few private Computer Training Centre. All together these educational institutions are sufficient for pursuing studies upto degree level in general stream.

However there is requirement for degree level science colleges, one law college and one technical training institute like ITI for the present population.

6.3 Health Infrastructures :

Badarpur Master Plan area has one CHC namely Srigouri CHC. There is one subsidiary health centre too, namely Badarpur subsidiary health centre.

There are six number of Health sub centre located at following locations,

- i) Debendra nagar sub centre at mouza Jum
- ii) Umarpur sub centre at mouza Umarpur
- iii) Alakargool sub centre at mouza Alakulipur
- iv) Tikarpara sub centre at mouza Tikarpara
- v) Gualaghat sub centre at mouza Dhakingram
- vi) Malua sub centre at mouza Naharpur

CHAPTER 7 : ENVIRONMENT AND CITY BEAUTIFICATION

PLAN

7.1. Description of eco-friendly areas like water bodies, beel, forests and also heritage areas :

There are few eco friendly water bodies within Badarpur town area, they are mostly pond and natural water channel carrying storm water of urban area to the river Barak and water channel Gomti. In rural area within master plan boundary, there are water bodies, natural low lying depression area (beels). These water bodies are the natural storage basin for catchment areas within master plan boundary.

The Dewchapra beel is situated at Badarpur town mouza (a rural mouza beyond municipal area and within proposed master plan area.) Gomti, water channel is draining water from major portion of railway town and mouzas like Jum 7th, Jum 5th and Jum 3rd.

7.2. Plan/measures for protection and conservation of Environment - friendly zones :

All developmental activity in Eco zones, in the low lying area have been proposed to be freezed. Restrictive measures on development control has been proposed through imposition of green belt zone. In addition existing land uses in the form of cultivation has been encouraged, agriculture/ paddy zone has been marked in semi urban areas in this master plan.

7.3. City Beautification Plan/Proposals :

i. Roadside plantation :

The road side plantation along edge of the footpath at national highway (NH) and major district roads (MDR) in town area has been proposed.

ii. Urban agriculture and urban forestry :

Urban agriculture is already in existence and shown in proposed land use map. Urban agriculture have been shown in Agriculture and Paddy zone in Land use map. Urban forestry is not proposed in the municipal area, however as restrictive measures, green belt area has been proposed in the municipal area specially along stretches in the flood prone river bank.

Similarly urban forestry will be available at proposed Eco zone in Land use map. Moreover, Road side plantation through Social Forestry has been proposed both sides of NH6 and state PWD Road(MDR} from Barak valley cement plant towards Alekhargul ie way to junction point of Karimganj and Hailakandi district.

iii. Public Rain Water Harvesting Scheme :

In all public building, provision to be checked before according approval to the project. In all group housing project and multistoried building, rain water harvesting system to be installed. This provision is being applied while issuing permission of multistoried building and group housing project.

iv. Development of parks and recreational spaces :

Though there are non availability of suitable developed and level ground, even than recreational centers and organized open spaces have been proposed in the land use map.

In urban area consisting of Badarpur municipal area and railway town, there are one organized play ground under railway authority. There are 5 nos recreational open spaces in urban area and another 5 nos open spaces in rural area of the master plan have been proposed.

v. Identification and demarcation of multi-purpose open spaces for sports, cultural functions, fairs, circus etc :

The existing field of N C College under College authority in the centre of the town and railway play ground in railway town are serving as multi purpose open space . In addition few organized vacant spaces have been marked in the proposed land use and zoning map for future development purpose. Those areas will also serve the purpose of organizing Fairs and Circus.

vi. Beautification of major transit zones (major junctions, bus depot, railway station, market zones etc) :

The Badarpur town itself is a major transit zone for passenger and goods transport to nearby border town Karimganj town and neighboring state of Tripura, Meghalaya and Mizoram. The improvement of roads with side drains have been proposed in this area. The goods transit through water way is done at IWT station at Badarpur ghat just outside the town boundary.. Passenger transit areas are at ASTC station at centre of the town. Railway station, is the major passenger and goods transit area for the regions surrounding Badarpur. The Railway station area to be maintained by Railway authority and this is to be maintained as per railway norms and guidelines.

Vending Zone:- The vending Zone is proposed at the mouza Badarpur Town Railway (Ward No.-1) along the Railway Station Road, which is shown in the proposed Land Use map of Badarpur Master Plan-2041.

Fire hydrants:- The Fire Hydrants are proposed at the mouza Badarpur Town Railway (Ward No.-1) along the Railway Station Road, which is shown in the proposed Land Use map of Badarpur Master Plan-2041

vii. Road signage and street furniture :

Road signage to be provided along national highway at every 500 mts by PWD(NH) division. In other district roads of state PWD, informatory and cautions signage to be erected at appropriate locations.

The adequately raised footpath (1.5 mts width at NH and 1 mt width at MDR) , the street lights and properly laid out road junction with rotary and divider form the important components of street furniture.

One number of rotaries at Chowrangee road junction in Badarpur town area has been proposed showing appropriate lay out and dimension. The layouts are shown in proposed circulation map of the Master plan.

viii. Zero Point:

Existing Road Level (Altitude) in meters for 8 nos. of major roads of Master Plan area are as follows:-

SL NO	ROAD NAME	LOW ELEVATION (in meter)	HIGH ELEVATION (in meter)	Zero Point
1	Naharpur to Badarpur Ghat	19.62	26.23	So, zero level is at 19.62, now road level for future is fixed at $(19.62 + 0.3) = 19.65$ meter.
2	Ward No.II to Umarpur Part III	18.81	37.79	So, zero level is at 18.81, now road level for future is fixed at $(18.81 + 0.3) = 18.84$ meter.
3	Shantiniketan Road	22.24	37.86	So, zero level is at 22.24, now road level for future is fixed at $(22.24 + 0.3) = 22.27$ meter.
4	Ward No. II to Ward No.III	23.47	36.25	So, zero level is at 23.47, now road level for future is fixed at $(23.47 + 0.3) = 23.50$ meter.

5	Badarpur town Alakulipur	20.15	23.26	So, zero level is at 20.15, now road level for future is fixed at (20.15 +0.3) = 20.18 meter.
6	Badarpur Chapra to Railway station road	21.46	24.83	So, zero level is at 21.46, now road level for future is fixed at (21.46 +0.3) = 21.49 meter.
7	Shaha Ziya Uddin Road	19.83	21.91	So, zero level is at 19.83, now road level for future is fixed at (19.83 +0.3) = 19.86 meter.
8	Hospital Road	18.19	22.53	So, zero level is at 18.19, now road level for future is fixed at (18.19 +0.3) = 18.22 meter.

CHAPTER 8 : LAND USE PLAN

8.1. Developable and non-developable area of the Master Plan :

Few areas near river bank prone to flood and soil erosion and low lying areas serving as drainage storage basin within Master Plan area can be categorized as non-developable area. These areas are to be of restrictive use from the environmental and ecological point of view. In addition for Badarpur Master plan area , a major portion of areas in villages, Jum 5th, Jum 6th and municipal ward IV have hilly terrain. The hill cutting on those areas may be restricted to stop soil erosion and maintain ecological balances.

All other areas fall under category of Developable area.

The possibility of expansion of the town is towards western direction.

8.2. Existing and Proposed land-use :

The future population and trend of infrastructure development determine the nature of land uses and their proportion in future land use. It has been assumed that there will not be any abrupt changes in any aspect affecting the future population figure in an unprecedented manner. Rather there will be moderate increase in present growth and it will continue for some more years in future. The projected population of Badarpur master plan area in 2041 is 57838. The Master plan or Outline Development plan is prepared to evolve a scientific and rational policy for urban development. The plan guides the future course of development for providing better environment of the people living in a geographical area,. The plan period of this Master plan is considered up to 2041. In normal course it should be revised after 2041 and if necessary it may be revised even earlier.

Studies in respect of land use pattern, transportation network, circulation pattern, housing and other activities indicate lack of urban amenities and infrastructure hindering the growth in the other sector. However opportunities in its location in regional set up vis a vis scope for promotion of trade and commerce are to be explored and exploited in positive manner.

Two important point may be worth mentioning on future growth of the Master Plan area..

1. Proposed opening of trade and commercial activity through rail transport via Karimganj- Bangladesh border as a part of Look east policy and linkage with other part of the country.

2. Badarpur ship/ steamer yard has been selected as one of the terminal station of national waterway connecting various important ports of the country.

a. **Residential** : A total area of 6.05 sq.kms has been proposed for residential use. This total area includes an area of 0.9075 sq. km.(15% of residential use area) meant for Affordable Housing as per recent government's notification. These areas are earmarked tentatively in the Mouzas of Umarpur pt II, Srigouri and Tikarpara . The residential areas are distributed all over the Master plan area to have smooth home and place of work relationship. The concentration of population in different areas would vary and accordingly there would be distribution like low, medium and high density zone as shown in proposed zoning map.

b. **Commercial** : A total area of 0.42 sq km has been proposed for commercial use. The dispensing of commercial activities in different nodal centres of the town and as well as along the major road is proposed in this plan. It is proposed to relocate wholesale and go-downs in the commercial areas in Niz Malua and Srigouri mouzas .

c. **Manufacturing/Industrial** : Encouragement for establishment of small industrial units like bamboo made product, earthen product etc. and based on agricultural products and other small scale industries may be given priority. The surrounding area of Badarpur town has potential for bamboo production, earthen product, brick and other building material items..

d. **Public & Semi-public** : A total area of 0.78 sqkms has been proposed for public and semi public use. This category consists of multiple uses like Government and semi Government offices, various education and health facilities, socio cultural and institutions, places of public uses etc. The railway establishment and other transportation related infrastructures are categorized into Public and Semi public use except railway tracks and road network.

e. **Green belt, Parks & Playgrounds (including public grounds for functions, sports, assembly)** : A total area of 0.51sq km has been proposed for green belt use. Mostly this area is for restriction of development along vulnerable river bank, low lying areas and soil conservation in hilly areas etc. Recreational open space has been proposed in ten number of locations within

Master Plan area. An area of 1.10 sq km has been proposed for organized open spaces and play ground. There is need for developing recreational facilities ,both active and passive within the Master plan area.

f. Open spaces : In proposed master plan, in addition to green belt zone and eco zone , above mentioned organized open space has been proposed. In addition there is proposal for normal vacant land kept for future development at an area in Government land in mouzas Umarpur pt III, Jum 5th, 6th and 7th.

g. Transport : Economic and socio cultural life of a geographical area is immensely influenced by regional transport linkage and inner traffic management system The growing demand for transportation facilities calls for assessment of the existing problems of traffic movement , circulation pattern, road geometrics. The assessment helps to evolve remedies in terms of short term and long term measure. Badarpur is the largest railway junction in Barak Valley region. An area of 1.36 sq km has been proposed in this Master plan under Transportational use.

The nearest airport is at Kumbhirgram (at Silchar) is 56 kilometres away from Badarpur town. The national highway 6 passes through the town.This NH causes the increase in regional traffic throughout master plan area of Badarpur.

h. Agriculture : In proposed master plan, an area of 6.89 sq.kms has been earmarked as Agriculture and Plantation(paddy) area. Major importance has been given to primary sector and maintenance of green field.

i. Special areas (Heritage, Pilgrimage, Notified Archaeological sites(if any)) : There is one historical Fort at Badarpurghat in the master plan, the Fort was constructed by Kachari king and used to fight against Mughals. This is a notified Archeological site.

j. Eco-zones : A total area of 0.06 sqkms has been proposed for use as eco-friendly zone. There are one eco-friendly water bodies earmarked in the proposed land use and Zoning map of Badarpur Master Plan.

k. Water bodies : There are river Barak and natural channel Gomti around the master plan area of Badarpur. Apart from this, natural water reservoir (locally called Beel) are scattered within the master plan area. All these

waterbodies are shown in proposed Infrastructure map (Drainage map) of Badarpu Master Plan.

No Construction Zone:-

A demarcation line has been indicated at a distance of 15 mts from the bank of all natural water bodies in municipal area and 50 mts from the bank all natural water bodies in non municipal area and this in between area to be restricted as No Construction zone. This is shown in proposed Utility (Drainage) map of this Master plan.

Partial Restriction on Construction has been proposed in following zones in specified manner:

- a) In Restricted Development Zone, Construction may be allowed on Compatible Government and Public uses without creating public nuisance and environmental hazard.
- b) In Recreational zone , the permission for those construction to be allowed which are related to active and passive recreation.
- c) In Hills and Forest area, no construction to be allowed for private uses except in patta land in hilly areas.
- d) In Eco zone and green belt area, only compatible uses maintaining ecological balance may be used.

EXISTING LAND USES IN TABULAR FORM AS IN 2022

Sl No.	Land Uses	Area in sq km	Percentage of Total Area	Remarks
1	Residential	5.28	21.45	Apart from Railway Track, all railway uses & Semi Public uses
2	Commercial	0.22	0.89	
3	Industrial (including Brick Kilns & Extractive areas)	0.25	1.02	
4	Public & Semi Public	0.31	1.26	
5	Play ground, Recreation & Open space	1.00	4.06	
6	Transport	1.35	5.49	
7	Agriculture	8.74	35.51	
8	River / Drain/ Water body	2.33	9.47	
9	Hills/ Forest	5.13	20.85	
	Total	24.61 sq km	100	

Land use survey done on existing area of 24.61 sq km.

PROPOSED LAND USES 2041

Sl No	Land Uses	Area in sq.km	Percentage of Total area	Percentage of Developed area	Remark
1	Residential	6.05	24.58	56.10	Total Developed area is 10.79sq km
2	Commercial	0.42	1.71	3.89	
3	Industrial	0.88	1.87	8.16	
4	Public & Semi Public	0.78	3.17	7.23	
5	Composite Zone	0.14	0.56	1.29	
6	Play Ground, Recreation & Open space	1.10	2.44	10.16	
7	Transport	1.36	5.53	12.60	
8	Eco Zone	0.06	0.24	0.57	
9	Agriculture	6.89	28.00		
10	Green Belt	0.51	2.07		
11	Water Bodies	1.93	7.84		
12	Hills/ Forest	2.64	10.73		
13	Restricted Development Zone	1.85	11.26		
	Total	24.61 Sq.Km	100%	100%	

#Total Proposed Developed area-----10.79 sq km

Total Proposed Master Plan area----- 24.61 sq.km

8.3. Composite zones or Mixed zones :

Residential zones and Commercial zones are allowed for mixed use zones. However only general commercial and retail commercial will be in combination with residential use. The restriction/relaxation in different parameters will be as elaborated in sec 24(C) of Assam Unified Building Construction (Regulation) Byelaws, 2022. At the mouza Badarpur Town (Chapra) , composite zone is proposed at map measuring about 0.14 Sq. Km in area.

Town Planning Scheme (TPS):-

The TPS-1 is proposed at the mouza Badarpur Town (Lahirbond) measuring about 0.26 Sq.Km in area and TPS-2 is proposed at the Mouza Nijmalua measuring about 0.42 Sq.Km in area.

Central Business District (CBD):-

The CBD is proposed at Ward No.1 of Badarpur Municipal area measuring about 0.37 Sq.km. which is shown in Proposed Land Use map.

Local Area Plan (LAP):-

The LAP is proposed at Ward No. -2 of Badarpur Municipal area measuring about 0.22 Sq. Km which is shown in Proposed Land Use map.

Crematorium :-

In addition to few existing crematorium in municipal area, crematorium in localities have been proposed. These cremation grounds are at Srigouri, Badarpur Town Railway, Umarpur PT-III, Municipal Ward No.-2

Zoning Regulations :

Uniform Zoning Regulations 2000 for all towns of Assam in combination with the Assam Unified Building Construction (Regulation) Byelaws,2022 will take care of all aspects of zoning regulations, development control and according land sale and building construction permission by the enforcing authority of this master plan. The Proposed Zoning map of this Master Plan will have to be read and referred while enforcing the zoning regulations.

a. A wholesale commercial zone may be demarcated by the Local Authority in zoning map as per guidelines and locations suggested in para 2.

b. In the chapter five(5) .It is proposed to relocate wholesale and go-downs in the commercial and industrial areas in mouza Naharpur near Steamer ghat out side town area.

CHAPTER 9: PROPOSED PROJECTS BRIEF AND TENTATIVE FUNDING SOURCE

9.1. Based on existing conditions and projected requirements of the planning area, identify priority sectors and projects :

Based on the analysis of the existing scenario of infrastructures in project area, following are the identified priority sectors-----

1. Solid waste Management project
2. Water supply project
3. Storm water drainage project

9.2. Fund requirement for each sector/project identified under the sectors :

A. Probable cost of Integrated Solid Waste Management for Badarpur Municipal Board :

Integrated Solid Waste Management (ISWM) is a system which defines a hierarchy while managing solid waste. According to the ISWM, solid waste must be managed in the following hierarchy with the first strategy being most desirable and the succeeding strategies to be followed depending on the quantity and category of waste.

Two probable sites have been proposed for Solid Waste Management of Badarpur urban area, one site at Ward IV of municipal area, measuring approx 24284 sq mts and other site at mouza Niz Malua at the boundary of Srigauri mouza measuring approx 11123 sq mts. Both the sites are shown in proposed Utility map (Drainage and Solid Waste management) of the Master Plan.

☐☐ **Reduction at source and reuse :** The most logical and preferred option is minimizing the waste production. This can be done by using better technologies, efficient packaging, reusing the waste produced at each level in some other process or activity.

☐☐ **Recycling :** Recovery of material from the waste and reusing it again in manufacturing of some other product is recycling. Although recycling helps in recovering the material waste, energy is used in the process.

☐☐ **Waste to Compost :** Decomposition of organic municipal waste to produce manure.

☐☐ **Waste-to-Energy** : Production of heat, electricity or fuel from the waste using bio-methanation, waste incineration or Refuse Derived Fuel (RDF).

☐☐ **Waste Disposal** : Inert waste or the residual waste produced in the other waste management process must be disposed in engineered landfills.

☐☐ Another aspect of ISWM is the integration of informal sector, to include rag pickers and private door-to-door waste collectors. The informal waste sector plays an important role in waste collection and segregation and this is done at a minimal cost.

Thus considering all options for a modern solid waste management project like Vermi composting, Digestion, Manure production, Incineration, Gas and Electricity production, Residual Landfill provision etc, the capital expenditure per person is derived from similar DPR of different towns (like Panaji, NOIDA)

☐☐ Taking into consideration the projected population of 57838 up to 2041 probable cost for managing solid waste is calculated as below.

The per capita investment cost in solid waste management comes out to be Rs 708.25

Therefore for population of 57838 (projected upto 2041) = Rs. 708.25 x 57838 = **Rs. 4,09,63,763.00**

Therefore for population of 57838 (projected upto 2041), the total estimated capital expenditure = **Rs. 4,09,63,763.00**

B. Probable cost of Water Supply schemes for Badarpur Municipal Board :

As per data supplied by the P.H.E deptt Badarpur the total available supply within master plan area is 18.7 lakhs litres.

Potable water for master plan area in 2041 is $135 \times 57838 = 7808130$ litres = 78.08 lakhs litres.

So, shortfall of (78.08- 18.7) i.e Approx 60 lakhs litres to be augmentation for 2041 in master plan area i'e future plant capacity of 6 MLD is proposed considering 60% efficiency of existing plant capacity 4.4 MLD.

(*) BENEFITS OF THE PROJECT :

After completion of the Project People residing in Water scarce area and expanded town area namely-

- (1) Badarpur Ghat (2) Bodoribond (3) Jangla Kalibari Area (4) FCI Road Area (5) Netaji Nagar Area (6) Ahibam Ram Road (7) West Kalairbond Area (8) Kalairbond Area (9) Jumbasti Area (10) Bilpar Area (11) Sitola Mandir Area (12) Jumbasti High School Road Area (13) Retired Colony Area (14) Srinagar Colony Area (15) Salebari Area (16) Shanti Niketan Road (17) Din Doyal Road (18) Daspaty (19) Railway Kalibari Colony Etc. will get sufficient & sustainable water to meet up their daily demand.

(*) MAJOR COMPONENT OF THE PROJECT :

- (I) Complete Treatment Plant = 3 MLD capacity
- (II) Power Sub Station -2 Nos
 - (a) At Intake Point - 200 KVA
 - (b) At Treatment Plant - 250 KVA
- (III) Steel Floating Barge of size (6.00mx 4.00m) – 1 No.
- (IV) Raw water Pumping Main : 300mm dia DISS(K-9) Pipe – 1200.Rm
- (V) Clear Water Pumping from T.Plant to Boosting Stations :
- (VI) C.W pumping main : 250/200 mm dia DISS (K-9)
 - Treatment plant to 3 nos. OHR
 - i) 250 mm dia DISS(K-9)=2000 Rm
 - ii) 200 mm dia DISS(K-9)=3500 Rm
- (VII) Distribution Net Work :
 - (a) Zone -1 (Area under Badarpur Town) – 20,400 Rm
 - (b) Zone -2 (Area under Jumbasti)– 15,100 Rm
 - (c) Zone -3 (Area under Retired Colony) – 18,950 Rm
 - (d) Zone -4 (Area under Srinagar Colony) – 10,200 Rm

(*) SUSTAINABILITY OF THE PROJECT :

It is presumed that after completion of the project , approximately 5,900 nos. of House hold water connection can be provided to the Residents of Badarpur Town . So in the financial points of view earning may be analyzed as follows :

Water tax per connection @ Rs 75.00/month.

Therefore, for 5,900 nos of Water Connection = Rs4,42,500 /Month.

Which can be utilized as operation & maintenance cost by the consumer committee of the respective zones

Hence, approx estimated amount of 6×400 (Rs. 400 Lakhs/ MLD) i.e Rs. 2400 Lakhs = Rs. 24.00 Crore is proposed for adequate water supply upto 2041.

C. Probable cost of Storm water drainage schemes for Badarpur Municipal Board :

The total requirement in pucca drain length for Badarpur urban is as follows:

The drain length required as estimated by Badarpur Municipal board = 15.285 kms

The drain length sanctioned and being executed by Municipal Board at present through SOPD scheme of Assam Government = 1.21kms

Total drain length required to be constructed = $15.285 - 1.21 = 14.075$ kms.

Out of this 14.075 kms four category of drains are proposed.....

a) Natural Channel with boulder pitching with filter medium for 3kms, estimated expenditure for model section at Rs 32195/ RM, it becomes
Rs $32195 \times 3000 =$ Rs 9,65,85,000.00,

b) Drain along major Road as RCC cover slab for a length of 5 kms length with estimated expenditure of model section at Rs 21295/RM, it becomes
Rs $21295 \times 5000 =$ Rs 10,64,75,000.00

c) Drain along minor Road for a length of 3 Kms, estimated expenditure of model RCC section at Rs 9263.00/RM, it becomes
Rs $9263.00 \times 3000 =$ Rs 2,77,89,000.00

d) Smaller Brick Drain along Lanes/ Bylanes for a length of 3.01 Kms, estimated expenditure for model section at Rs 4285/RM , it becomes
=Rs $4285.00 \times 3010 =$ Rs 1,28,97,850.00

So total expenditure for various category of drainage channels,
Rs 9,65,85,000.00+ Rs 10,64,75,000.00+ Rs 2,77,89,000.00+ Rs 1,28,97,850.00
=Rs 24,37,46,850.00

9.3. Identify Land site for proposals: in case of Government land, inventory of Municipal Land, State Govt./ Govt. agency owned land etc and plan for acquiring/leasing the same.

There are approx 3.22 sq km of Government land available in different dag nos of following mouzas within Badarpur Master Plan area .

(1) Mouza : Badarpur town- Alakulipur

Dag no: 357, 606,627,637,756,778,783,793,806,826,952,968,971,976/1086, 1015/1097,826/1134

(2) Mouza: Badarpur town- Chapra

Dag no. 1366,1367,1368,1383,1384,1385,1386,1387,1388,1389,1390,1391, 1392,1393,1394,1432,1433,1434,1435,1436,1437,1438,1439,1460,1461,1462,1463,1464,1465,1466,1467, 1468, 1470, 1471, 1490,1491,1492,1493, 1494,1495,1496,1497,1505,1506,1508,1516,1517,1518,1519,1520,1521, 1522,1523,1524,1525,1526,1539,1540,1542,1544,1548,1549,1553 ,1554,1555

CHAPTER 10 - DISASTER MANAGEMENT PLAN

Introduction-

Disaster management can be broken down into four phases : prevention, preparation, relief and recovery. Each of these phases involve different aims and objectives, they may overlap depending on the nature of the disaster. However the overall objectives are the same. The aim of any disaster management programme is to reduce the impact of disaster on human life and property. The aim of plan is to ensure that all components of disaster management are addressed to facilitate planning, preparedness, operational co-ordination and community participation.

Objectives of the Plan :-

The Karimganj district lies in highly vulnerable Seismic Zone i'e Zone-V and moreover the district is highly flood and cyclone prone. Almost every year heavy flood occurs and creates a great havoc to the lives and infrastructure. Presently the large scale erosion makes the lives miserable of riverside people. So, there is a need of outlining a comprehensive disaster management plan keeping in view of the available resources to stream line the services before, during and after any disaster strikes.

1. Flood/Urban Flood:-

District Disaster Management Plan for Karimganj district has already been prepared and it takes care of urban water logging and flood including Badarpur town and surrounding areas with in Master Plan.

2. Earthquake:-

Details Plan has been indicated in district Disaster Management plan .

3. Others:-

Details Plan has been indicated in district Disaster Management plan .

Disaster Management Plan pronounces in the clearest terms that the process of adaptation & change to manage disasters has to have several dimensions; Prevention, Mitigation, response, relief, Recovery & Rehabilitation.

It recognizes that disaster management has to be a collective & multi- sectoral effort.

It makes it clear that the process of adaptation & change can no longer be an optional one & every agency of Government must account for what it did or failed to do.

The objectives of this departmental disaster management plan are:-

- To assess vulnerability of the departmental assets / works created with the help of ULBs of the district to different disaster.
- To generate preparedness plan for fighting against different disaster.
- To train up departmental personnel for providing emergency response services during disaster.
- To keep co-ordination with DDMA & other authorities.
- Sensitization for community participation.

Types of Disasters (Experienced in the Badarpur Master Plan Area):-

Common Disasters	Natural	Man Made disasters
Cyclone		Boat capsize
Flood		Fire- House / Forest
Earthquake		Accident- Road/ Railway

Seasonal Hazard Analysis: -

Generally in this region the probability of major hazard is due to flood / urban flood, earthquake, landslide & river erosion. The periodic duration of the causes of hazards are as below.

HAZARD & VULNERABILITY SCENARIO -

Type of Hazards	Jan	Feb	Mar	April	May	June	July	Aug	Sep	Oct	Nov	Dec
Flood				←				→				
Earth Quake	←										→	
Landslide				←				→				
Storm/Cyclone			←					→				
Fire Accident	←										→	
River Erosion				←				→				
Industrial Hazard	←										→	
Bomb Blast	←										→	
Road Accident	←										→	

Disaster Probability: -

The probable period of occurrence & damages from major causes of hazard in this region.

Sl. No.	Type of hazards / Disaster	Time of Occurrence	Potential impacts/ Probable Damage	Vulnerable Areas
1	Flood/ Urban Flood	April – September	Damage of roads and drains, submerge of public and private buildings.	Within Master Plan area of the town.
2	Earthquake	January – December	Loss of life, infrastructure, constructed structure, public and private	Within Master Plan area of the town

			buildings.	
3	River Erosion	April – September	Loss of public / private property.	Within Master Plan area of the town
4	Storm/ Cyclone	April – September	Loss of public / private property.	Within Master Plan area of the town

Risk Assessment :-

Two major hazard may be considered for risk assessment in this region.

Type of Hazard	Potential impact	Vulnerability	Vulnerable Area
Flood / Urban Flood	Damage of roads and drains	i)Siltation of drainage channels	All towns and surrounding Master Plan area in the district.
		ii)Temporary water logging of reclaimed area.	Mission Road, FCI Road, Salebari, Fish market near S T Road, Dindayal Road and other adjoining areas.
Earthquake	Loss of life and property	Infrastructure which are not earthquake resistant (Assessment may be needed)	Damage of public and private buildings in towns and their surroundings.

Vulnerability Analysis :-

List of Embankments :-

Sl. No.	Name of Embankments	Type/ Category of Embankments	Length in K.M.
1	Embankment cum road along steamer ghat path at Srigouri & Nizmalua Mouza.	B	1.5

River Carrying Capacity :-

Sl. No.	Name of River	Gauze Station	HFL (in Mts.)	Danger Level (in Mts.)
1	Barak	Badarpurghat	18.48	16.85

4. Standard Operational Process (SOP) on Disaster: Pre-disaster, During and Post disaster :-

Standard Operational Process (SOP) under District Town and Country Planning, Karimganj office has been prepared which is also applicable for Badarpur Master Plan area.

Deputy Director, Town & Country Planning, Karimganj is responsible for preparation of Master Plan and Zoning Regulations with in master plan area to control the land use within Master Plan Area.

- 1) Imparting training to the departmental personnel , making plan of operation for each kind of disaster as pre- disaster activities.
- 2) Department has formed various teams for providing emergency response services during disaster.

Departmental Standard Operating Procedures (SOPs) :

SOPs describe the regularly recurring work processes that are to be conducted or followed within an organization.

Phase wise description of departmental responsibilities / activities -

Deputy Director, Town & Country Planning, Karimganj is responsible for preparation of Master Plan and land use within urban area. Moreover, Deputy Director, Town & Country Planning, Karimganj has prepared a response plan to address various disaster with the help of ULBs and Development Authority.

Pre-Disaster Response Plan :-

- 1) Carrying out Mock drill of preparedness.
- 2) Making plan of operation and list of required materials, tools for each kind of disaster.
- 3) Impart training to the staff in duty.
- 4) Awareness generation and sensitization.
- 5) Forecasting and warning.

During the disaster Response Plan :-

- 1) The Nodal Officer shall initiate immediate necessary measures for evacuation, activate search and rescue teams in consultation with the concern members whom have been entrusted this work.
- 2) If necessary, the Nodal Officer will initiate setting up of relief camp through Municipal Board for the affected people in a safer place.

Post – disaster Response Plan :-

- 1) A post disaster evaluation will have to be carried out to assess the loss caused by disaster.
- 2) Efficiency / workability of the plan and organizational setup and the DMP as a whole.

POINTS FOR CONTINUOUS PLANNING, INNOVATIVE THINKING & IMPLEMENTATION :-

1. All developmental plans approved by dist/block authorities are checked from disaster mitigation angle.
2. Continuous planning & execution of plans for providing sustainable livelihood for most vulnerable communities.
3. Implementation of the coastal eco system management is continuously monitored & all violations checked.
4. Alternate safe housing technology along with rainwater harvesting structures is constantly encouraged & mainstreamed for long-term vulnerability reduction.
5. Continuous Awareness campaign & encouragement for Disaster proof Habitat planning at community level including shifting from low lying areas to safe raised grounds.(with some incentives if feasible).
6. Disaster management including first-aid & rescue & evacuation as a compulsory part of school, college, educational institutions (both techno-tech) curriculum starting from primary level.
7. Equipping each PHC/CHC/Dist hospitals to provide training in first-aid round the year & making it compulsory for all citizens to learn first-aid. (Test on first-aid compulsory for any entrance exam including entry into +2 level college/school, as part of test for driving license for two wheeler up wards etc)
8. One centre school/college in each GP, two at block & four at dist equipped to provide training in rescue & evacuation round the year.

Programmes proposed within routine departmental works for disaster prevention, mitigation and strategy for its successful implementation :-

Mitigation embraces all measures taken to reduce both the affect of the hazard itself and the vulnerable condition to it in order to reduce the scale of a future disaster. The various measures for mitigation may be categorized into two groups : Structural and Non-structural.

Structural :-

- 1) Maintenance of drainage channel.
- 2) Maintenance of embankment.

3) Retrofitting of weak structure.

Non – Structural :-

- 1) Regulation of land use pattern.
- 2) Enforcement of building bye law in construction.
- 3) Awareness generation and training.

Review, Up-gradation, Dissemination of Disaster Management Plan :-

Disaster Management plan of the department is updated every year as per suggestion of the District Disaster Management Authority.

The Disaster Management Plan is disseminated to the stake holders through awareness campaign.

Functional Organization Structures at State, District and Local levels :-

DIRECTOR OF TOWN AND COUNTRY PLANNING
(State level)



DEPUTY DIRECTOR, TOWN AND COUNTRY PLANNING
(District level)

Standard Operating Procedure (SOP) of Town and Country Planning Office, Karimganj :-

The Nodal officer is the first person to initiate action & put the SOP of the Department into ground reality.

The Nodal Officer will co-ordinate with DDMC and DDMA in the event of any disaster. It is the responsibility of the Nodal officer & his team to coordinate & keep liasoning with subordinate agencies & higher level agencies.

All other activities in field level are co-ordinated by the officers in charge of Rescue team and First Aid/Medical Team as formed by the Nodal Officer. All actions are duly endorsed by the Office (Deputy Director, Town & Country Planning). The various components of SOPs have been incorporated & integrated in the different chapters of this plan in appropriate paras & points.

-----End of report-----

